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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/587,172

Applicant(s)

OHBA ET AL.

Examiner

HEE-YONG KIM

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in reply to Applicant's Response dated June 22, 2010.
2. **Claims 6 and 20** has been cancelled.
3. **Claims 1, 3, 5, 9, 11-14, 16-18, 19-20, and 22** has been amended.

Response to Arguments

4. Objections to **claims 9, 11-14, and 16-18** are withdrawn because amendment overcomes the previous objections.
5. Rejection of **claim 20** under 35 U.S.C. 101 is withdrawn. However, computer readable medium can include a transitory medium which is non-stationary. Since the specification discloses a medium drive, examiner interprets it as a medium drive (non-transitory).
6. Applicant's arguments with respect to the prior art rejection over **claims 1-22** have been considered but are moot in view of the new ground(s) of rejection.
7. Regarding independent **claims 1, 19-20, and 22**, Applicant argues (pp. 8-10) that Ohba does not disclose claim features. Examiner respectfully disagrees. Applicant argues against previous rejection by quoting cursor image following target in Ohba. Please notice that there are several embodiments in Ohba. Previous rejection was based on embodiment 3 of Ohba. Because of amendment, the new rejection is based on the embodiment 1 (Fig.6 and 7).

8. Regarding dependent **claims 3-5, 7-18**, applicant argues (pp.10-14) that rejection should be withdrawn because they are dependent on claim 1 which is allowable. Since Ohba discloses all the features of claim 1, the argument is moot.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1-2, 6, and 19-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Ohba (US 2002/0,097,247), hereafter referenced as Ohba.

Regarding **claim 1**, Ohba discloses Image Processor, Image Processing Method, Recording Medium, Computer Program and Semiconductor Device. Specifically Ohba discloses An image processor (Image Processor 2, Fig.1) comprising object image generating means (image generating means, paragraph 9) for generating an object image of an object (generating an object image, paragraph 9) that is associated with a predetermined event (determined event, paragraph 71), image combining means (Superimposing Image Generator 106, Fig.3) for superimposing said object image on top of a mirrored video image feature (superimposing the object image on the mirrored moving image, paragraph 56) that includes an image of an operator (Fig 6) as a portion thereof to generate a combined image (display combined image, paragraph 9), the image processor being adapted to provide production of the combined image (display

combined image, paragraph 9) on a predetermined display device (predetermined display, paragraph 9),

detection means (difference value detector 107, Fig.3) for detecting the position of the image (searches for the location of image of the operator's, paragraph 80) of said operator included in said mirrored video image feature (Fig.6)

wherein said image combining means (Superimposing Image Generator 106, Fig.3) being adapted to combine said object image and said mirrored video image feature (superimposing the object image on the mirrored moving image, paragraph 56) in such a manner that said object image is displayed in an area that an image of a hand of said operator can reach (movement of hand in the area in which the menu image is displayed, paragraph 69), depending on the position of the image (area of pulldown image is detected and selected by the operator, paragraph 82) of said operator detected by said detection means, and

means for generating a motion image map (difference value detector, paragraph 61) , the motion image map being obtained by layering images of difference (difference image, paragraph 61) that represent differences in images between frames of said mirrored video image feature, said image combining means being adapted to determine an area (menu image has a hierarchical structure, paragraph 70, examiner interprets it as main menu to pulldown menu is presented based on hand movement of the operator, where each menu has its own location) where said object image is to be combined, depending on a range (detecting amount of the movement of hand, paragraph 69) and frequency (plurality of movements of the operator, paragraph 73) of the motion of the

image of said operator as determined on from the motion image map (difference values are cumulatively added, paragraph 73).

Regarding **claim 2**, Ohba discloses everything claimed as applied above (see claim 1). In addition, Ohba discloses further comprising image acquisition means (camera 1, Fig.1) for acquiring a video image feature (moving image captured, paragraph 38)) that includes an image of said operator (Fig. 6) as a portion thereof captured with a predetermined image capturing device (camera 1, Fig.1), from the image capturing device; and image reversing means that mirrors (mirroring by the image processor, paragraph 38) the acquired video image feature (moving image captured by video camera, paragraph 38) to generate said mirrored video image feature (mirrored moving image can be generated, paragraph 38).

Regarding **claim 6**, Ohba discloses everything claimed as applied above (see claim 1). In addition, Ohba discloses further comprising means for generating a motion image map (Difference value), the motion image map being obtained by layering images of difference (difference, paragraph 73) that represent the difference in images between frames(difference between preceding and following, paragraph 73) of said mirrored video image feature (mirrored moving image, paragraph 73), said image combining means being adapted to determine an area (menu image has a hierarchical structure, paragraph 70, examiner interprets it as main menu to pulldown menu is presented based on hand movement of th operator, where each menu has its own location) where said object image is to be combined, depending on the motion of the

image of said operator determined on the basis of this motion image map (area of pulldown image is detected and selected by the operator, paragraph 82)

Regarding **claim 19**, Specifically Ohba discloses An image processing method (Fig.4 and 5) comprising:

receiving information of an object (data read from the medium, object data, paragraph 42) that is associated with a predetermined event (Fig.6 and 7, menu selection), detecting position of an image of said operator (search for the location of the image of the operator, paragraph 80) included in a mirrored video image feature, generating a motion image map (difference value detector, paragraph 61) by layering images of difference (difference image, paragraph 61) that represent differences in images between frames of said mirrored video image feature, determining an area (menu image has a hierarchical structure, paragraph 70, examiner interprets it as main menu to pulldown menu is presented based on hand movement of th operator, where each menu has its own location) where an object image of the object is to be generated based on a range (detecting amount of the movement of hand, paragraph 69) and frequency (plurality of movements of the operator, paragraph 73) of motion of the image of said operator as determined from the motion image map (difference values are cumulatively added, paragraph 73), producing a combined image (superimposing the object image on the mirrored moving image, paragraph 56) that includes the image of the operator as a portion thereof and the object image, and providing combined image (display combined image, paragraph 9) on a predetermined

display device (predetermined display, paragraph 9),
said combined image includes said object image and said
mirrored video image feature in such a manner that said object image is displayed in a
range that an image of a hand of said operator can reach (movement of hand in the
area in which the menu image is displayed, paragraph 69), depending on the detected
position of the image of said operator (area of pulldown image is detected and selected
by the operator, paragraph 82).

Regarding **claims 20**, the claim is a computer readable medium claims
corresponding to the apparatus claim 19. Therefore, they are rejected for the same
reason as claim 19.

Regarding **claim 22**, Ohba discloses A semiconductor device (Main CPU 10,
Fig.2) integrated in a device mounted on a computer (computer, paragraph 40) to which
a display device (display device 3, Fig.1) is connected (connected with CRTC,
paragraph 41), thereby with the semiconductor device, said computer is directed to
form: object image generating means (image generating means, paragraph 9) for
generating an object image of an object (generating an object image, paragraph 9) that
is associated with a predetermined event (determined event, paragraph 71);
image combining means (Superimposing Image Generator 106, Fig.3) for
superimposing said object image on top of a mirrored video image feature
(superimposing the object image on the mirrored moving image, paragraph 56) that
includes an image of an operator (Fig 6) as a portion thereof
to generate a combined image (display combined image, paragraph 9);

display control means for providing production of the resulting combined image on said display device; and

detection means (difference value detector 107, Fig.3) for detecting the position of the image (searches for the location of image of the operator's, paragraph 80) of said operator included in said mirrored video image feature;

motion image map generating means (difference value detector, paragraph 61), for generating motion image map by layering images of difference (difference image, paragraph 61) that represent differences in images between frames of said mirrored video image feature, said image combining means being adapted to determine an area (menu image has a hierarchical structure, paragraph 70, examiner interprets it as main menu to pulldown menu is presented based on hand movement of th operator, where each menu has its own location) where said object image is to be combined, depending on a range (detecting amount of the movement of hand, paragraph 69) and frequency (plurality of movements of the operator, paragraph 73) of the motion of the image of said operator as determined on from the motion image map (difference values are cumulatively added, paragraph 73), and

said image combining means (Superimposing Image Generator 106, Fig.3) is directed to provide a function of combining said object image and said mirrored video image feature (superimposing the object image on the mirrored moving image, paragraph 56) in such a manner that said object image is displayed in a range that an image of a hand of said operator can reach(movement of hand in the area in which the menu image is displayed, paragraph 69),

depending on the position of the image (area of pulldown image is detected and selected by the operator, paragraph 82) of said operator detected by said detection means.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba.

Regarding **claim 3**, Ohba discloses everything claimed as applied above (see claim1). However, Ohba fails to disclose wherein said detection means is adapted to detect the position of the face of the operator (target could be face) in the image of said operator, and said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in an area suitable to the detected position of the face.

However, Ohba disclose implementing command input device as a hand (see above claim 1, and Fig.13A-C, command input device is a target in Ohba's convention). Ohba further discloses that target could be remarked part of person (paragraph 10) such as eyes, mouth, hands, etc. of the operator (paragraph 69).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba by incorporating face instead of hand as a command input, in order to use the face motion as command input. The Ohba system, incorporating face as a command input instead of hand, has all the features of claim 3.

13. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Salter (US 2003/0,151,628) (hereafter referenced as Salter).

Regarding **claim 4**, Ohba discloses everything claimed as applied above (see claim1). However, Ohba fails to disclose wherein said detection means is further adapted to detect the size of the image of said operator, and said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed with the size suitable to the detected image of said operator.

In the analogous field of endeavor, Salter discloses Interactive Game Providing Instruction in Musical Notation and in Learning an Instruction. Specifically he discloses that size of the game object will change accordingly for a selected keyboard, in order to keep the width proportional to the width of on-screen keyboard (paragraph 261).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba by providing detecting object size and displaying the object size proportional to the image of operator, in order to keep the object size proportional to the size of image of operator. The Ohba system,

incorporating detecting object size and displaying the object size proportional to the image of operator, has all the features of claim 4.

14. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Darrell (US 6,445,810) (hereafter referenced as Darrell).

Regarding **claim 5**, Ohba discloses everything claimed as applied above (see claim1). However, Ohba fails to disclose wherein said image combining means is adapted to combine an image representing a marker that indicates that the operator has detected, at the position of the image of said operator detected by said detection means.

In the analogous field of endeavor, Darrell discloses Method and Apparatus for Personnel Detection and Tracking. Specifically Darrell discloses wherein said image combining means is adapted to combine an image representing a marker (region is marked, col. 8, line 57-65, fig.5) that indicates that the operator has detected (when face is detected, col. 8, line 57-65), at the position of the image of said operator detected by said detection means (face pattern detection, Fig.2), in order to track a face frame to frame (col.8, line 57-65).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba by providing detecting and marking a face, in order to track a face frame to frame. The Ohba system, incorporating the Darrell detecting and marking a face, has all the features of claim 5.

15. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Dooley (US 2004/0,215,689) (hereafter referenced as Dooley).

Regarding **claim 7**, Ohba discloses everything claimed as applied above (see claim 1). Ohba further discloses *determining an area where said object image is to be combined, depending on the motion of the image of said operator* (the object controller determines the position reported from the difference value detector (motion detector) as the cursor image, paragraph 134). However, Ohba fails to disclose comprising means for detecting change in color of each area between frames of said mirrored video image feature, said image combining means being adapted to determine an area where said object image is to be combined, depending on the motion of the image of said operator determined on the basis of the change in color.

In the analogous field of endeavor, Dooley discloses Computer and Vision Based Augmented Interaction in the Use of Printed Media. Dooley specifically discloses motion detection based on changes in color frame to frame, in order to use change in color as additional measure of motion (paragraph 84).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba by providing detecting and marking a face, in order to track a face frame to frame. The Ohba system, incorporating the Dooley motion detection based on changes in color, has all the features of claim 7.

16. **Claims 8 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Imagawa (US 6,353,764) (hereafter referenced as Imagawa).

Regarding **claim 8**, Ohba discloses everything claimed as applied above (see claim 1). However, Ohba fails to disclose wherein, when said mirrored video

image feature contains images of multiple candidate operators who can be an operator, said detection means is adapted to detect the position of an image of a candidate operator for each of said multiple candidate operators, and said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that the images of the hands of the individual candidate operators can reach, depending on the positions of the images of said multiple candidate operators detected by said detection means.

In the analogous field of endeavor, Imagawa discloses Control Method. Specifically Imagawa discloses wherein, when said video image feature contains images of multiple candidate operators (multiple operators, col.1, line 26) who can be an operator, said detection means (monitoring section, col.4, line 6) is adapted to detect the position (person's position is monitored by a camera, col.2, line 48-50) of an image of a candidate operator (monitor three people, col.4, line 6-7) for each of said multiple candidate operators, in order to provide control method in the presence of multiple operators (col.1, line 40-45). However, Ohba and Imagawa still fail to disclose wherein said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that the images of the hands of the individual candidate operators can reach, depending on the positions of the images of said multiple candidate operators detected by said detection means.

However, the above is analogous to the situation that people (*multiple operators*) in the family room seek for a remote control (*object image*) and whoever first pushes the button has a response from TV or cable box and usually the remote control is easy to be reached from every body (*in a range that the images of the hands of the individual candidate operators can reach*), in order to be operated fairly by multiple operators.

Therefore, given this analogy, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing wherein said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that the images of the hands of the individual candidate operators can reach, depending on the positions of the images of said multiple candidate operators detected by said detection means, in order to be operated by multiple operators. The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, has all the features of claim 8.

Regarding **claim 15**, Ohba and Imagawa discloses everything claimed as applied above (see claim 8). However Ohba fails to disclose wherein said object image generating means is adapted to generate multiple object images corresponding to the respective candidate operators, and said image combining means is adapted to combine said multiple object images and said mirrored video image feature in such a

manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator.

Imagawa further discloses wherein said object image generating means is adapted to generate multiple object images (Imagawa: Provide Control method despite the presence of multiple apparatuses (*objects*) and people (*operators*) in the neighborhood, col.1, line 40-45) corresponding to the respective candidate operators (correspondence between apparatuses and people). Also it is obvious that *said image combining means is adapted to combine said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator*, because it is extension of displaying an object image in range of an operator by keeping correspondence between each operator and object.

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing wherein said object image generating means is adapted to generate multiple object images corresponding to the respective candidate operators, and said image combining means is adapted to combine said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator. The Ohba system, incorporating the Imagawa control method with multiple operators and objects, further incorporating combining said multiple object images and said mirrored video image feature in such a manner that the respective

object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator, has all the features of claim 15.

1. **Claims 9-11, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Imagawa, and further in view of Cortjens (US 5,528,289).

Regarding **claim 9**, The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, as applied to claim 8, anticipates further comprising means for selecting, when said object image is accessed, the image of the candidate operator who has accessed the object image, as the image of said operator, because the combination is precisely intended for this. However, the combination fails to disclose display control means for zooming, panning and/or tilting the image of the selected candidate operator.

In the analogous field of endeavor, Cortjens discloses Method for Automatically Adjusting a Videoconferencing System Camera to Center an Object. Cortjens specifically discloses display control means (Display Controller 10, Fig.1) for automatic zooming, panning and/or tilting of the intended object (Fig. 5B, 6A-6B), in order to cause camera to be automatically positioned to center object in the monitor (col.4, line 4-17).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing automatic zooming, panning and/or tilting, in order to in order to cause camera to be automatically positioned to center object in the monitor. The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Cortjens automatic zoom and panning and tilt, has all the features of claim 9.

Regarding **claim 10**, The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 9, discloses wherein said display control means is adapted to do zooming, panning and/or tilting (Cortjens: Fig. 5B, 6A-6B) of the image of the selected candidate operator by digital processing (Cortjens: digital controller, col.6, line 57, Digital Processing 135 for zoom at Fig 7).

2. Regarding **claim 11**, The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 9, discloses wherein

said display control means (Cortjens: Fig.5B) is adapted to do zooming, panning or tilting of the image of the selected candidate operator (Cortjens: Fig.5B) by controlling the image capturing device (Cortjens: pan motor, col.6, line 57, zoom lens, col.23, line 63) for capturing said mirrored video image feature.

Regarding **claim 16**, the Ohba system, incorporating the Imagawa control method with multiple operators and objects, further incorporating combining said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator, as applied to claim 15, anticipates further comprising means for selecting, when either one of object images is accessed, the image of the candidate operator corresponding to the object image, as the image of said operator corresponding to the object image, because the combination is precisely intended for this. However, the combination fails to disclose display control means for zooming, panning and/or tilting the image of the selected candidate operator.

Cortjens specifically discloses display control means (Display Controller 10, Fig.1) for automatic zooming, panning and/or tilting of the intended object (Fig. 5B, 6A-6B), in order to cause camera to be automatically positioned to center object in the monitor (col.4, line 4-17).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing automatic zooming, panning and/or tilting, in order to in order to cause camera to be

automatically positioned to center object in the monitor. The Ohba system, incorporating the Imagawa control method with multiple operators and objects, further incorporating combining said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, further incorporating the Cortjens automatic zoom and panning and tilt, has all the features of claim 16.

Regarding **claim 17**, the Ohba system, incorporating the Imagawa control method with multiple operators and objects, further incorporating combining said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 16, discloses wherein said display control means is adapted to do zooming, panning or tilting (Cortjens: Fig. 5B, 6A-6B) of the image of the selected candidate operator by digital processing (Cortjens: digital controller, col.6, line 57, Digital Processing 135 for zoom at Fig 7)

3. Regarding **claim 18**, the Ohba system, incorporating the Imagawa control method with multiple operators and objects, further incorporating combining said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 16, discloses wherein said display control means (Cortjens: Fig.5B) is adapted to do zooming, panning or tilting of the image of the

selected candidate operator (Cortjens: Fig.5B) by controlling the image capturing device (Cortjens: pan motor, col.6, line 57, zoom lens, col.23, line 63) for capturing said mirrored video image feature.

4. **Claims 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba in view of Imagawa, further in view of Darrell, and further in view of Cortjens.

Regarding **claim 12**, Ohba and Imagawa disclose everything claimed as applied above (see claim 8).

However, Ohba and Imagawa fail to disclose further comprising means for selecting, when said mirrored video image feature is a stereo image captured simultaneously from multiple different angles, the image of the candidate operator who is displayed at the position closest to said object image in each of the images making up of the stereo image, as the image of said operator, and display control means for zooming, panning and/or tilting the image of the selected candidate operator.

Imagawa discloses operator selection section which selects a person closest to a predetermined position as one of choices based on the people's attributes (col.4, line 4-33), in order to select an operator based on their predetermined attribute (col.4, line 4-33).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing

selecting the image of the candidate operator who is displayed at the position closest to said object image, in order to select an operator based on their predetermined attribute. However, Ohba and Imagawa still fail to disclose *said mirrored video image feature is a stereo image captured simultaneously from multiple different angles, and display control means for zooming, panning and/or tilting the image of the selected candidate operator.*

Darrell discloses receiving stereo image data from multiple cameras (col.2, line 28-30), in order to generate disparity image (col.2, line 28-30).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa by providing the stereo image, in order to generate disparity image. However, Ohba and Imagawa and Darrell still fail to disclose *display control means for zooming, panning and/or tilting the image of the selected candidate operator.*

Cortjens specifically discloses display control means (Display Controller 10, Fig.1) for automatic zooming, panning and/or tilting of the intended object (Fig. 5B, 6A-6B), in order to cause camera to be automatically positioned to center object in the monitor (col.4, line 4-17).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohba and Imagawa and Darrell by providing automatic zooming, panning and/or tilting, in order to cause camera to be automatically positioned to center object in the monitor. The Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and

mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Darrell stereo images, and further incorporating the Cortjens automatic zoom and panning and tilt, has all the features of claim 12.

Regarding **claim 13**, the Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Darrell stereo images, and further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 12, discloses wherein said display control means is adapted to do zooming, panning or tilting (Cortjens: Fig. 5B, 6A-6B) of the image of the selected candidate operator by digital processing (Cortjens: digital controller, col.6, line 57, Digital Processing 135 for zoom at Fig 7).

5. Regarding **claim 14**, the Ohba system, incorporating the Imagawa control method, further incorporating combining an object image and mirrored video image feature in such a manner that object image is displayed in a range that the images of the hands of the individual candidate operators can reach, further incorporating the Darrell stereo images, and further incorporating the Cortjens automatic zoom and panning and tilt, as applied to claim 12, discloses wherein said display control means (Cortjens: Fig.5B) is adapted to do zooming, panning or tilting of the image of the selected candidate operator (Cortjens: Fig.5B) by controlling the image capturing

device (Cortjens: pan motor, col.6, line 57, zoom lens, col.23, line 63) for capturing said mirrored video image feature.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HEE-YONG KIM** whose telephone number is (571)270-3669. The examiner can normally be reached on **Monday-Thursday, 8:00am-5pm EST**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HEE-YONG KIM/
Examiner, Art Unit 4192

/Andy S. Rao/
Primary Examiner, Art Unit 2621
August 27, 2010